

CLAIMS

1. An overmolded module comprising:

a surface mount component situated over a substrate, said surface mount component comprising a first terminal and a second terminal;

5 a first and a second pad situated on said substrate, said first pad being connected to said first terminal and said second pad being connected to said second terminal; a solder mask trench situated underneath said surface mount component, said solder mask trench being filled with molding compound.

10 2. The overmolded module of claim 1 further comprising a moldable gap

situated between a bottom surface of said surface mount component and a top surface of said substrate, said moldable gap including said solder mask trench.

15 3. The overmolded module of claim 2 wherein said moldable gap is filled with

said molding compound.

4. The overmolded module of claim 1 further comprising an overmold, said

overmold being situated over said surface mount component.

20 5. The overmolded module of claim 1 wherein said surface mount component

is selected from the group consisting of a resistor, a capacitor, an inductor, a diplexer, a diode, and a SAW filter.

6. The overmolded module of claim 3 wherein said moldable gap has a height of between approximately 45.0 micrometers and 65.0 micrometers.
- 5 7. The overmolded module of claim 1 wherein said overmolded module is an MCM.
8. The overmolded module of claim 1 wherein said substrate comprises a laminate circuit board.
- 10 9. An overmolded module comprising:
 - a surface mount component situated over a substrate, said surface mount component comprising a first terminal and a second terminal;
 - a first and a second pad situated on said substrate, said first pad being connected to said first terminal and said second pad being connected to said second terminal;
 - a moldable gap situated underneath said surface mount component, said moldable gap comprising a solder mask trench, said solder mask trench being filled with molding compound.
- 15 10. The overmolded module of claim 9 wherein said moldable gap is filled with said molding compound.

11. The overmolded module of claim 9 further comprising an overmold, said overmold being situated over said surface mount component.

12. The overmolded module of claim 11 wherein said overmold comprises said
5 molding compound.

13. The overmolded module of claim 9 wherein said moldable gap has a height
of between approximately 45.0 micrometers and 65.0 micrometers.

10 14. The overmolded module of claim 9 wherein said surface mount component
is selected from the group consisting of a resistor, a capacitor, an inductor, a diplexer, a
diode, and a SAW filter.

15 15. The overmolded module of claim 9 wherein said overmolded module is an
MCM.

16. An overmolded module comprising:

a surface mount device situated over a substrate, said surface mount device
comprising a plurality of terminals;

20 a plurality of pads situated on said substrate, each of said plurality of pads being
connected to a respective one of said plurality of terminals;

a solder mask trench situated underneath said surface mount device, said solder

mask trench being filled with molding compound.

17. The overmolded module of claim 16 wherein said surface mount device is a leaded surface mount device.

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18. The overmolded module of claim 16 wherein said surface mount device is a leadless surface mount device.

19. The overmolded module of claim 16 wherein said surface mount device
10 comprises at least one component, said at least one component being selected from the group consisting of an active component and a passive component.

20. The overmolded module of claim 16 wherein said overmolded module is an
MCM.